



# BOSS™ Ultrasonic Screwed Heat Meters



## Data Sheet

BOSS™ LTHW and CHW\*  
Screwed Heat Meters are available in  
sizes 15mm - 40mm with MBus as  
standard and additional communication  
protocols available to order



### Product Specification:

- Screwed Male BSPT
- MID Class 2 Compliant
- RHI Compliant
- Temperature Range 5°C to 90°C
- Suitable for LTHW and CHW\* Systems
- M-Bus Protocol as standard
- Optional Protocols;
  - LoRa
  - Wireless M-Bus
  - Wireless M-Bus + 3 pulse inputs
  - Wireless M-Bus + 3 pulse inputs; 1 pulse output or 2 pulse output
- 3 Volt lithium battery
- Suitable for Vertical and Horizontal Installation
- LCD Display, 8 digits plus special characters
- Complete with 1.5mtr PT500 flow/return sensors
- IP65 Rated

\* Chilled water version available on request

*All of our BOSS™ products are manufactured by selected factories that are regularly monitored for ongoing compliance to our ethical and technical requirements.*

## Materials of Construction

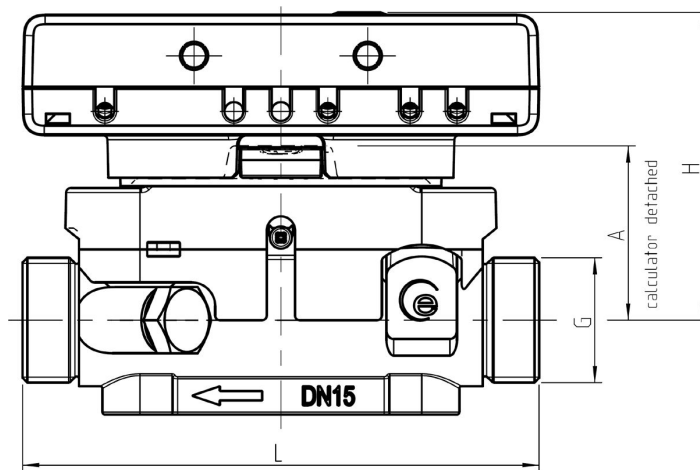
- Body : Brass
- Internals : Stainless Steel
- Calculator Housing : Composite
- Sensors : Stainless Steel

## Technical Details

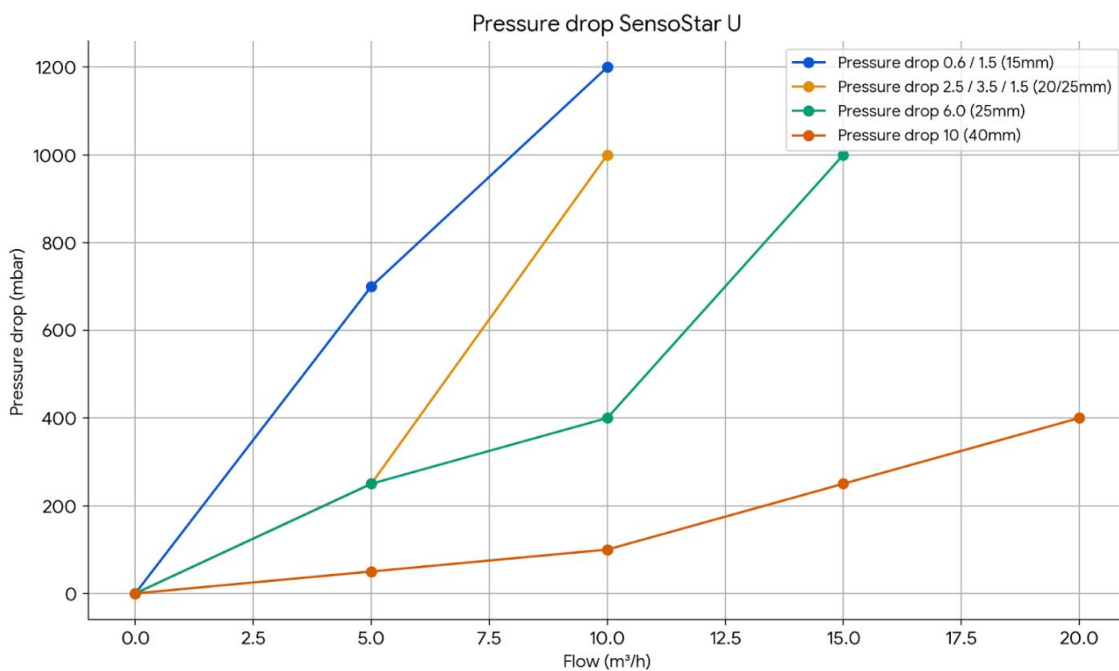
Product Code	Description	Size	Nom. Flow	Max Pressure	Max. Flow	Min. Flow	Flow @ 0.1 bar Press Drop	Pulsed Output Value
		mm	m3/hr	bar	m3/hr	ltrs/hr	m3/hr	kWh per pulse
38411170	BOSS 35HMPB 15MM HEAT METER MID CL2 PULSED C/W MBUS	15	1.5	16	3	12	6	1
38411181	BOSS 35HMPB 20MM HEAT METER MID CL2 PULSED C/W MBUS	20	2.5	16	5	25	7.5	1
38411192	BOSS 35HMPB 25MM HEAT METER MID CL2 PULSED C/W MBUS 3.5 M3	25	3.5	16	7	28	9	1
38411200	BOSS 35HMPB 25MM HF HEAT METER MID CL2 PULSED C/W MBUS 6 M3	25	6	16	12	60	11	1
38411211	BOSS 35HMPB 40MM HEAT METER MID CL2 PULSED C/W MBUS	40	10	16	20	100	13	10

# Dimensions

Product Code	Size	G	L	H	A	Weight
	mm	inches	mm	mm	mm	kg
38411170	15	3/4	110	65	38.5	0.6
38411181	20	1	130	66	39.5	0.68
38411192	25	1.1/4	150	66	39.5	0.82
38411200	25	1.1/4	260	68.5	42	1.08
38411211	40	2	200	73	46.5	1.53



## Sensostar U Pressure Drops (mbar)



## Calculator unit

### Dimensions

	H	W	D
Calculator housing (in mm)	75	110	34.5

### Technical Detail

Temperature range medium	0 – 90°C
Ambient temperature in the field	0 – 50°C cooling (from qp 1,5 to qp 10) 5 – 55°C at 95 % relative humidity
Transport temperature	-25 – 70°C (for maximal 168 h)
Storage temperature	-25 – 55°C
Temperature difference range $\Delta\theta$ heat	3 – 100 kelvin
Temperature difference range $\Delta\theta$ cooling	-3 – -50 kelvin
Minimum temp. difference $\Delta\theta$ heat	> 0.05 kelvin
Minimum temperature difference $\Delta\theta$ cooling	> 0.5 / < -0.5 kelvin
Minimum temperature difference $\Delta\theta$ HC heat / cooling	< -0.05 kelvin
Resolution temperature	0.01°C
Measuring cycle temperature; dynamic	60 seconds with a lifetime of 10 years; 30 seconds with a lifetime of 6+1 years
Measuring cycle flow	2 seconds
Display	LCD - 8 digits + special characters
Decimal places	up to 3 after comma

Units	MWh, kW, m <sup>3</sup> , m <sup>3</sup> /h (kWh, GJ, MMBTU, Gcal); unit of energy can be set wh the amount of energy is still ≤ 10 kWh
Interfaces	Optical interface (M-Bus protocol); Optional: wireless M-Bus; wireless M-Bus + 3 pulse inputs; M-Bus; M-Bus + 3 pulse inputs with 1 pulse or 2 pulse outputs; LoRa
Power supply	Exchangeable 3 V lithium battery; all types prepared for 3 V power pack (input voltage 230 V / 24 V)
Estimated lifetime years	10 (no option: 1 pulse output); 6+1
Data storage	Nonvolatile memory
Reading dates	Selectable yearly reading date; 15 monthly and semimonthly values: via display or wireless M-Bus (compac mode); 24 monthly and semimonthly values: via optical interface or M-Bus
2 tariff registers	Can be set individually; adding up energy or time
Storage of maximum values	Flow, power and temperatures (inlet, outlet, ΔΘ), plus the respective maximum values of the last 15 months
Protection class	IP65
CE	Yes
EMC	EN 1434
<b>Temperature sensors (2-wire technique)</b>	
Platinum precision resistor	Pt 1000
Connection	½" bsp
Length of cable	1.5 mtrs
Installation	Asymmetrical; symmetrical
<b>Dimensions calculator</b>	
<b>unit</b>	
Calculator housing	mm
(H x W x D)	75 x 110 x 34,5